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For Week Ending September 14, 1974

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

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EPIDEMIOLOGIC NOTES AND REPORTS

HUMAN PLAGUE – New Mexico, Utah

Two cases of human plague – 1 confirmed and 1 presumptive – have been reported to CDC recently and are summarized below.

Utah

On August 23, a 5-year-old boy in a suburban area of Salt Lake County, Utah, developed high fever and vomiting, initially diagnosed as a viral syndrome. The fever persisted, and on August 26 on examination in a local emergency room a large, tender node in the left axilla was noted. Dicloxacillin was begun for presumed adenitis. By August 27, because he remained febrile and had developed a rash, he was hospitalized in Salt Lake City. The examiner found a temperature of 103.6°F, a generalized maculopapular rash, a 2 x 3 cm tender, fluctuant left axillary node, and smaller cervical nodes. The initial white blood cell count was 17,000. A chest X-ray and blood cultures were negative. The rash cleared with discontinuation of dicloxacillin, but the fever

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TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	WEEK ENDING		MEDIAN 1969-1973	CUMULATIVE, FIRST 37 WEEKS		
	September 14, 1974	September 15, 1973		1974	1973	MEDIAN 1969-1973
Aseptic meningitis	115	196	196	2,074	3,068	3,067
Brucellosis	5	1	4	115	134	134
Chickenpox	242	289	– – –	99,622	145,185	– – –
Diphtheria	6	2	2	181	126	113
Encephalitis:						
Primary: Arthropod-borne and unspecified	39	43	36	684	1,017	985
Post-Infectious	4	6	4	197	221	243
Hepatitis, Viral:						
Type B	232	134	138	6,817	5,680	5,680
Type A	714	1,031	1,104	29,805	35,881	38,933
Type unspecified	175			5,904		
Malaria	9	11	32	158	172	2,012
Measles (rubeola)	107	64	130	19,908	24,207	26,941
Meningococcal infections, total	30	14	17	994	1,061	1,770
Civilian	29	14	16	968	1,037	1,577
Military	1	–	1	26	24	189
Mumps	269	303	460	44,542	55,454	68,202
Pertussis	63	– – –	– – –	1,203	– – –	– – –
Rubella (German measles)	141	98	218	9,910	26,021	38,583
Tetanus	–	1	3	60	61	82
Tuberculosis, new active	622	571	– – –	21,780	22,264	– – –
Tularemia	2	4	4	109	121	108
Typhoid fever	8	14	10	282	495	240
Typhus, tick-borne (Rky. Mt. spotted fever)	10	13	11	671	546	384
Venereal Diseases:						
Gonorrhea	18,145	16,812	– – –	638,588	596,726	– – –
Syphilis, primary and secondary	534	462	– – –	17,582	17,677	– – –
Rabies in animals	50	41	51	2,087	2,601	2,600

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax	2	Poliomyelitis, total	5
Botulism	9	Paralytic	5
Congenital rubella syndrome: N.Y. Ups. 1, Tex. 2	41	Psittacosis	110
Leprosy	73	Rabies in man	–
Leptospirosis: Hawaii 1, Tenn. 1	28	Trichinosis	68
Plague	1	Typhus, murine: Md. 1, Tex. 1	18

PLAGUE – Continued

remained. On August 28 aspiration of the bubo revealed gram-negative rods. Gentamicin was used for 2 days. By September 1 he was afebrile and has remained so. On September 5 the organism was identified as *Yersinia pestis* by the Utah State Laboratory and later confirmed by fluorescent antibody tests and phage typing at CDC. Streptomycin was begun, and the remainder of the patient's course was uneventful.

The boy had no history of travel to mountainous or rural areas in the previous month. However, he had spent time at a home in an economically depressed neighborhood in the county. At this house there were rabbits, guinea pigs, dogs, cats, and an owl. The children collected Norway rats and field mice to feed the owl and had captured ground squirrels in the past. Blood was drawn from the domestic animals for hemagglutination titers, and a rodent trapping program in the area was initiated. The medical community has been alerted, but no further cases have been reported.

(Reported by Robert Hawkes, M.D., Resident in Pediatrics, Primary Children's Hospital; Fred Ruskin, M.D., Resident in Pediatrics, University of Utah Medical Center; Harry Gibbons, M.D., Director, Salt Lake City-County Health Department; Dale Callister, M.S., Medical Bacteriologist, Bureau of Laboratories, Taira Fukushima, M.D., Director, Bureau of Disease Prevention, and Lyman Olsen, M.D., Director, Utah State Division of Health; the Plague Branch, Vector-borne Diseases Division, Bureau of Laboratories, CDC; and an EIS Officer.)

New Mexico

On the morning of September 14, 1974, a 5-year-old girl awoke with discomfort in the left inguinal area. She continued to complain of pain and by 2 pm had become febrile. At 3:30 pm she was taken to the emergency room at the Gallup Indian Medical Center. Physical examination revealed a temperature of 104.8°F rectally and 3 firm, enlarged left inguinal lymph nodes. There was no overlying erythema or induration. No skin lesions suggestive of insect bites were seen; however, 2 small petechial lesions were seen in the left lower quadrant. The patient was lethargic and appeared acutely ill and was subsequently hospitalized.

A peripheral white blood cell count was 11,000 with 53% polymorphonuclear leukocytes, 24% bands, and 23% lymphocytes. Her hematocrit was 37%. X-rays of the chest and pelvis were normal. The differential diagnoses included lymphadenitis due to *Yersinia pestis, Francisella tularensis, Staphyloccus sp.*, or *Streptococcus sp.* A needle aspirate of an inflamed node and blood cultures were performed. The patient was treated with parenteral penicillin, chloramphenicol, and streptomycin.

Bacteriologic examination was performed at the Gallup Indian Medical Center. A gram-stain of lymph node aspirate showed a few gram-negative rods. These organisms fluoresced when stained with *Y. pestis* fraction I fluorescent conjugate. Blood cultures obtained on the evening of September 14 were negative. On September 15, blood agar and eosin-methylene blue media inoculated with lymph node aspirate showed no growth. However, a supplemented peptone broth culture of lymph node aspirate yielded bipolar staining organisms when stained by Wayson's technique. The fluorescent antibody stain for *Y. pestis* was positive.

Although the patient continued to have fever, with spikes up to 105°F, during the early morning hours on September 15, she had improved clinically by that afternoon.

The patient denied recent contact with prairie dogs or other small rodents. However, she has had daily contact with feral and domestic dogs near Rock Springs, New Mexico, where she is cared for each day by her grandmother. In addition, she had visited the Tohatchi, New Mexico, area within 5 days before the onset of illness.

The clinical and laboratory evidence suggests that this illness is compatible with a human case of plague.

(Reported by Stanley Grzyb, M.D., General Medical Officer, Bruce Tempest, M.D., Charlotte M. Lambert, Chief, Microbiology Section, Gallup Indian Medical Center; Richard Kozoll, M.D., District Health Officer, McKinley County Health Office; C. Fordham von Reyn, M.D., Acting State Epidemiologist, New Mexico Health and Social Services Department; the Plague Branch, Vector-borne Diseases Division, Bureau of Laboratories, and the Bacterial Zoonoses Branch, Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

Editorial Note

This is the third reported case of plague in Utah *(1,2)*; the last was in 1966 on the Navajo Reservation. Plague has been found in rodents or fleas in 13 Utah counties in a recent survey *(3)*.

References

1. Pollitzer R: Plague (WHO Monogr No. 22), Geneva, 1954
2. Reed W, et al: Bubonic plague in the southwestern United States. Medicine 49:465-486, 1970
3. Olsen P: Summary of Utah plague investigations. University of Utah Epizootiology Section, August 1969

PARALYTIC SHELLFISH POISONING – Massachusetts, New Hampshire

On August 31, 1974, a 38-year-old Canadian woman experienced perioral paresthesias 15 minutes after eating 2 dozen steamed mussels which she had gathered from Rye Beach, New Hampshire, earlier that day. Within 4 hours, she developed generalized weakness, dysphonia, and vomiting, and she was hospitalized in Massachusetts. Shortly thereafter, she had a respiratory arrest from which she was successfully resuscitated. As of September 9, she had recovered, except for some residual paresthesias, and was discharged from the hospital.

Two other persons who ate about a dozen of the same mussels each developed perioral paresthesias and generalized weakness 2½ hours after the meal and were treated with purgation and induced emesis. A fourth person ate only 4 or 5 mussels and had only perioral paresthesias. None were hospitalized, and all recovered.

Laboratory studies (mouse bioassay) by the Massachusetts Department of Health revealed high levels of a neurotoxin in the remaining mussels and in the vomitus of the 3 most seriously ill patients. Unusually high numbers of the dinoflagellate *Gonyaulax tamarensis* had been detected in New England coastal waters late in August, and Rye Beach and other sections of the coastline of New Hampshire, Maine,

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING SEPTEMBER 14, 1974 AND SEPTEMBER 15, 1973 (37th WEEK)

AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
	1974	1974	1974	1974	Cum. 1974	1974	1973	1974	1974	1974	1974	1974	Cum. 1974
UNITED STATES	115	5	242	6	181	39	43	4	232	714	175	9	158
NEW ENGLAND	6	–	32	–	–	4	5	–	14	18	18	1	8
Maine *	–	–	1	–	–	–	–	–	1	3	1	–	–
New Hampshire *	–	–	2	–	–	–	3	–	–	1	–	–	–
Vermont	5	–	5	–	–	–	1	–	–	6	–	–	–
Massachusetts	1	–	8	–	–	3	1	–	1	6	17	–	2
Rhode Island	–	–	12	–	–	–	–	–	–	2	–	–	3
Connecticut	–	–	4	–	–	1	–	–	12	–	–	1	3
MIDDLE ATLANTIC	12	–	22	–	1	2	7	–	37	127	39	2	28
Upstate New York	7	–	5	–	–	–	–	–	5	57	6	1	10
New York City	–	–	15	–	–	–	1	–	5	13	–	1	11
New Jersey	4	–	NN	–	–	1	3	–	16	30	31	–	3
Pennsylvania	1	–	2	–	1	1	3	–	11	27	2	–	4
EAST NORTH CENTRAL	11	1	97	–	2	9	14	–	42	139	42	1	13
Ohio	–	–	7	–	1	3	8	–	7	30	–	1	6
Indiana	2	–	11	–	–	1	–	–	–	–	23	–	–
Illinois	4	1	–	–	1	–	–	–	13	65	15	–	2
Michigan	5	–	42	–	–	1	4	–	17	35	3	–	4
Wisconsin	–	–	37	–	–	4	2	–	5	9	1	–	1
WEST NORTH CENTRAL	8	–	16	–	–	2	2	–	9	29	12	–	4
Minnesota	7	–	–	–	–	–	–	–	5	11	2	–	1
Iowa	1	–	10	–	–	2	1	–	1	4	1	–	1
Missouri *	–	–	–	–	–	–	–	–	1	–	7	–	1
North Dakota	–	–	1	–	–	–	1	–	–	–	–	–	–
South Dakota	–	–	–	–	–	–	–	–	–	2	–	–	1
Nebraska	–	–	1	–	–	–	–	–	1	8	2	–	–
Kansas	–	–	4	–	–	–	–	–	1	4	–	–	–
SOUTH ATLANTIC	18	2	14	–	1	4	6	1	25	127	13	3	24
Delaware	–	–	–	–	–	–	–	–	–	–	–	–	–
Maryland	5	–	1	–	–	3	2	1	4	11	1	–	3
District of Columbia	–	–	–	–	–	–	–	–	–	–	–	2	4
Virginia	4	2	1	–	–	–	–	–	6	9	3	–	6
West Virginia	–	–	12	–	–	–	–	–	–	2	2	–	–
North Carolina	3	–	NN	–	1	–	1	–	3	13	1	–	4
South Carolina	2	–	–	–	–	–	–	–	2	5	1	–	–
Georgia	–	–	–	–	–	–	–	–	–	25	–	–	1
Florida	4	–	–	–	–	1	3	–	10	62	5	1	6
EAST SOUTH CENTRAL	10	–	7	–	–	12	3	2	18	49	–	–	6
Kentucky	2	–	4	–	–	–	1	–	2	12	–	–	4
Tennessee	6	–	NN	–	–	11	2	–	9	31	–	–	1
Alabama	–	–	1	–	–	–	–	1	2	4	–	–	–
Mississippi	2	–	2	–	–	1	–	1	5	2	–	–	1
WEST SOUTH CENTRAL	16	1	23	–	9	1	3	–	31	87	13	–	10
Arkansas *	–	–	1	–	–	–	–	–	1	9	1	–	1
Louisiana *	6	–	NN	–	–	–	–	–	6	17	9	–	1
Oklahoma	–	–	4	–	–	–	–	–	2	4	3	–	3
Texas	10	1	18	–	9	1	3	–	22	57	–	–	5
MOUNTAIN	–	–	7	–	30	–	1	–	3	21	10	–	7
Montana	---	---	---	---	–	---	1	---	---	---	---	---	–
Idaho	–	–	–	–	–	–	–	–	–	1	–	–	–
Wyoming	–	–	–	–	–	–	–	–	–	4	–	–	–
Colorado	–	–	2	–	–	–	–	–	–	–	–	–	5
New Mexico	–	–	4	–	12	–	–	–	–	2	4	–	1
Arizona	–	–	–	–	18	–	–	–	3	11	3	–	–
Utah	–	–	1	–	–	–	–	–	–	1	3	–	–
Nevada	–	–	–	–	–	–	–	–	–	2	–	–	1
PACIFIC	34	1	24	6	138	5	2	1	53	117	28	2	58
Washington	2	–	14	6	127	1	–	–	3	11	13	–	–
Oregon	1	–	–	–	–	–	–	–	9	19	3	–	2
California *	27	1	–	–	7	4	2	1	40	85	11	2	54
Alaska	–	–	4	–	4	–	–	–	1	–	–	–	–
Hawaii	4	–	6	–	–	–	–	–	–	2	1	–	2
Guam *	–	–	–	–	–	–	–	–	–	–	–	–	2
Puerto Rico	–	–	18	–	–	–	–	–	–	–	26	–	1
Virgin Islands	–	–	1	–	–	–	–	–	–	–	–	–	–

*Delayed reports: Aseptic Meningitis: Calif. 30
Chickenpox: Me. 3, N.H. 1, Mo. 1 Calif. 6, Guam 2
Encephalitis, primary: Calif. 2
Hepatitis B: Calif. 65, Guam 1
Hepatitis A: N.H. 8, Ark. delete 1, La. delete 1, Calif. 101, Guam 6
Hepatitis unspecified: Me. 1, La. delete 1, Calif. 8, Guam 2
Malaria: Calif. 3

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING SEPTEMBER 14, 1974 AND SEPTEMBER 15, 1973 (37th WEEK) -- Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1974	Cumulative		1974	Cumulative		1974	Cum. 1974	1974	1974	Cum. 1974	Cum. 1974
		1974	1973		1974	1973						
UNITED STATES	107	19,908	24,207	30	994	1,061	269	44,542	63	141	9,910	60
NEW ENGLAND	4	921	7,354	–	51	46	31	5,900	–	11	975	1
Maine *	–	43	66	–	2	1	3	788	–	3	280	–
New Hampshire	–	198	857	–	12	6	–	279	–	–	16	1
Vermont	–	57	119	–	2	3	–	28	–	2	20	–
Massachusetts	4	388	3,906	–	15	12	8	962	–	4	337	–
Rhode Island	–	59	604	–	7	3	18	2,425	–	–	19	–
Connecticut	–	176	1,802	–	13	21	2	1,418	–	2	303	–
MIDDLE ATLANTIC	29	8,017	2,464	2	148	145	28	3,571	8	16	1,071	6
Upstate New York	13	945	802	–	55	51	7	868	6	7	244	2
New York City	7	590	899	–	33	29	14	634	2	–	146	1
New Jersey	4	5,527	411	–	42	34	1	655	–	5	444	2
Pennsylvania	5	955	352	2	18	31	6	1,414	–	4	237	1
EAST NORTH CENTRAL	38	7,694	8,498	15	127	140	93	12,764	17	35	3,237	9
Ohio	–	3,041	282	12	51	56	9	3,129	–	3	497	2
Indiana	6	232	632	2	13	4	7	983	–	7	549	–
Illinois	18	2,030	2,061	–	10	24	7	1,114	6	3	512	3
Michigan	10	1,917	4,364	1	37	41	33	5,423	8	11	1,190	3
Wisconsin	4	474	1,159	–	16	15	37	2,115	3	11	489	1
WEST NORTH CENTRAL	1	686	439	1	74	80	5	2,697	–	2	217	9
Minnesota	–	83	19	1	24	8	–	41	–	–	12	1
Iowa	–	134	277	–	13	19	2	1,634	–	–	15	–
Missouri *	–	261	52	–	19	32	–	384	–	–	36	2
North Dakota	–	28	58	–	3	3	1	34	–	1	15	3
South Dakota	–	27	–	–	3	4	–	2	–	1	26	–
Nebraska	–	2	6	–	3	7	–	81	–	–	6	–
Kansas	1	151	27	–	9	7	2	521	–	–	107	3
SOUTH ATLANTIC	10	542	1,215	5	200	180	19	5,425	7	38	1,183	14
Delaware	2	9	8	–	5	1	1	92	–	–	27	–
Maryland	2	24	12	3	21	23	2	109	–	1	5	–
District of Columbia	–	3	5	–	1	4	–	50	–	–	4	–
Virginia *	2	35	418	1	31	34	–	565	–	3	44	3
West Virginia	4	195	210	–	7	4	6	2,930	–	13	270	1
North Carolina	–	5	4	1	43	38	NN	NN	3	1	54	3
South Carolina	–	49	59	–	16	12	–	111	–	19	609	1
Georgia	–	4	152	–	8	21	–	1	3	1	3	1
Florida	–	218	347	–	68	43	10	1,567	1	–	167	5
EAST SOUTH CENTRAL	8	222	600	–	98	94	29	5,548	9	15	556	2
Kentucky	7	156	369	–	38	33	2	2,213	–	2	198	–
Tennessee	1	35	165	–	44	39	19	2,446	6	9	278	1
Alabama *	–	18	9	–	9	15	7	517	1	1	61	–
Mississippi	–	13	57	–	7	7	1	372	2	3	19	1
WEST SOUTH CENTRAL	6	199	678	4	161	165	44	3,154	3	10	353	7
Arkansas *	–	8	69	–	11	13	–	129	–	–	8	–
Louisiana	–	13	84	3	35	38	1	217	–	–	77	3
Oklahoma *	1	26	54	–	17	29	1	367	1	2	46	1
Texas	5	152	471	1	98	85	42	2,441	2	8	222	3
MOUNTAIN	1	736	722	1	31	32	2	1,046	1	2	408	–
Montana	---	373	17	---	1	6	---	172	---	---	66	–
Idaho	–	51	255	–	2	4	–	157	–	–	15	–
Wyoming	–	1	80	–	3	–	–	9	1	–	–	–
Colorado	–	30	105	–	8	11	2	505	–	–	158	–
New Mexico	–	61	117	–	2	3	–	178	–	2	119	–
Arizona	1	16	19	1	6	4	–	–	–	–	–	–
Utah	–	5	128	–	6	2	–	20	–	–	17	–
Nevada	–	199	1	–	3	2	–	5	–	–	33	–
PACIFIC	10	891	2,237	2	104	179	18	4,437	18	12	1,910	12
Washington	1	64	1,013	–	11	19	3	1,533	1	3	347	1
Oregon	–	–	456	1	13	12	3	770	–	1	217	1
California *	7	762	684	1	74	142	11	1,969	17	8	1,329	10
Alaska	–	–	65	–	3	6	1	105	–	–	–	–
Hawaii	2	65	19	–	3	–	–	60	–	–	17	–
Guam *	–	15	50	–	1	–	–	356	–	–	5	–
Puerto Rico	13	592	1,813	–	6	8	21	954	–	1	29	4
Virgin Islands	2	26	1	–	–	–	2	32	–	–	–	1

*Delayed reports: Measles: Me. 2, Va. delete 1, Calif. 2, Guam 1
Meningococcal infection: Mo. 1, Calif. 2
Mumps: Me. 1, Mo. 1, Ark. 2, Calif. 11, Guam 2
Pertussis: Va. delete 1, Okla. delete 1, Calif. 9
Rubella: Calif. 9

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDING SEPTEMBER 14, 1974 AND SEPTEMBER 15, 1973 (37th WEEK) – Continued

AREA	TUBERCULOSIS (New Active)		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1974	Cum. 1974	Cum. 1974	1974	Cum. 1974	1974	Cum. 1974	1974	Cumulative 1974	Cumulative 1973	1974	Cumulative 1974	Cumulative 1973	Cum. 1974
UNITED STATES	622	21,780	109	8	282	10	671	18,145	638,588	596,726	534	17,582	17,677	2,087
NEW ENGLAND	35	908	–	–	8	–	8	579	16,364	15,291	14	358	480	18
Maine *	–	71	–	–	1	–	–	45	1,381	917	–	26	21	2
New Hampshire	1	21	–	–	1	–	–	22	548	547	–	9	6	3
Vermont *	–	17	–	–	–	–	–	17	447	253	–	2	13	1
Massachusetts *	22	498	–	–	3	–	6	194	7,287	6,856	7	149	216	4
Rhode Island *	7	85	–	–	2	–	2	48	1,505	1,611	–	14	13	4
Connecticut	5	216	–	–	1	–	–	253	5,196	5,107	7	158	211	4
MIDDLE ATLANTIC	106	3,950	2	2	45	2	60	2,297	76,490	81,945	100	3,811	3,955	50
Upstate New York	32	557	2	–	11	1	27	354	14,213	14,320	10	346	258	18
New York City	34	1,525	–	1	25	1	2	1,072	33,329	37,934	47	2,205	2,430	–
New Jersey	21	749	–	1	8	–	4	131	10,590	11,659	16	611	698	19
Pennsylvania	19	1,119	–	–	1	–	27	740	18,358	18,032	27	649	569	13
EAST NORTH CENTRAL	81	2,962	6	1	24	–	22	2,868	99,608	89,349	59	1,519	1,625	160
Ohio *	17	790	–	–	5	–	15	583	26,504	21,206	9	211	193	26
Indiana	9	438	–	–	1	–	1	238	9,662	8,277	3	137	211	12
Illinois *	17	861	3	–	10	–	6	1,216	31,390	31,711	19	792	813	32
Michigan	38	795	–	–	6	–	–	534	22,213	20,923	27	301	350	3
Wisconsin	–	78	3	1	2	–	–	297	9,839	7,232	1	78	58	87
WEST NORTH CENTRAL	17	806	19	–	8	–	17	788	32,717	30,920	15	433	237	557
Minnesota *	5	133	–	–	4	–	–	173	7,630	6,350	2	60	77	199
Iowa *	2	85	–	–	1	–	1	2	3,984	3,647	–	24	40	104
Missouri	9	389	14	–	1	–	10	260	10,543	10,788	12	297	90	25
North Dakota	–	21	2	–	–	–	–	18	505	487	–	3	2	89
South Dakota *	–	39	3	–	–	–	1	76	1,606	1,550	–	2	4	91
Nebraska	1	35	–	–	–	–	–	119	2,798	3,292	–	9	7	4
Kansas	–	104	–	–	2	–	5	140	5,651	4,806	1	38	17	45
SOUTH ATLANTIC	148	4,599	9	1	44	5	382	4,968	162,383	146,213	180	5,559	5,124	284
Delaware	1	76	–	–	–	–	10	48	2,175	2,148	1	58	69	1
Maryland	26	595	1	–	6	1	44	481	16,809	12,450	60	557	509	23
District of Columbia	4	269	–	–	1	–	–	355	11,862	12,326	16	475	633	–
Virginia *	23	580	3	–	1	4	128	377	14,279	14,595	9	591	565	73
West Virginia *	4	211	–	–	12	–	4	62	1,882	2,157	–	13	17	26
North Carolina	27	713	3	–	3	–	95	755	21,697	21,502	21	680	433	36
South Carolina	10	441	–	1	4	–	52	315	16,828	15,231	10	595	771	3
Georgia	19	640	2	–	3	–	47	1,195	33,600	28,419	27	632	768	91
Florida	34	1,074	–	–	14	–	2	1,380	43,251	37,385	36	1,958	1,359	31
EAST SOUTH CENTRAL	49	1,943	10	3	43	2	96	1,463	53,615	48,458	30	906	969	188
Kentucky *	7	424	2	–	14	–	13	195	6,599	5,898	7	210	258	115
Tennessee	21	611	6	2	21	2	60	612	21,339	18,668	7	354	328	45
Alabama	8	579	2	–	4	–	10	331	14,731	13,689	9	171	135	25
Mississippi	13	329	–	1	4	–	13	325	10,946	10,203	7	171	248	3
WEST SOUTH CENTRAL	90	2,527	47	–	21	1	77	2,093	85,454	76,788	48	1,651	1,964	456
Arkansas	7	299	26	–	1	–	8	173	8,209	9,185	2	76	105	58
Louisiana *	9	360	2	–	8	–	1	443	17,432	16,508	6	436	591	21
Oklahoma *	3	217	14	–	2	1	56	284	7,847	7,029	3	97	128	121
Texas *	71	1,651	5	–	10	–	12	1,193	51,966	44,066	37	1,042	1,140	256
MOUNTAIN	15	694	11	–	17	–	6	741	24,388	20,295	9	405	429	118
Montana *	---	54	–	---	–	---	1	---	1,325	1,181	---	3	3	5
Idaho	1	23	–	–	–	–	1	36	1,282	1,291	–	9	9	–
Wyoming	2	15	5	–	3	–	1	18	502	359	–	6	23	9
Colorado *	–	137	–	–	–	–	1	224	6,816	5,117	4	92	154	27
New Mexico *	4	143	2	–	3	–	1	140	3,658	3,673	1	56	62	42
Arizona *	6	244	–	–	8	–	–	202	7,112	5,991	3	157	115	34
Utah	–	33	4	–	–	–	1	12	1,337	1,119	1	13	11	1
Nevada *	2	45	–	–	3	–	–	109	2,356	1,564	–	69	52	–
PACIFIC	81	3,391	5	1	72	–	3	2,348	87,569	87,467	79	2,940	2,894	256
Washington	4	236	–	–	12	–	1	223	8,060	8,194	–	53	110	–
Oregon	2	147	1	–	–	–	2	220	7,842	7,807	1	65	47	9
California *	65	2,668	4	1	56	–	–	1,809	67,854	67,769	78	2,787	2,662	239
Alaska *	–	75	–	–	2	–	–	52	1,975	2,088	–	11	16	8
Hawaii	10	265	–	–	2	–	–	44	1,838	1,609	–	24	59	–
Guam *	–	27	–	–	–	–	–	–	221	306	–	3	3	–
Puerto Rico	9	382	–	–	4	–	–	56	2,253	3,028	14	612	526	41
Virgin Islands *	–	3	–	–	–	–	–	11	216	175	1	33	17	–

*Delayed reports: Tuberculosis: Me. 1, Ohio delete 2, Ky. delete 1 Ariz. delete 2, Alaska 19, Calif. 75
RMSF: Va. delete 1
Gonorrhea: Mass. 1008, Ill. 7443, La. delete 1, Calif. 2070, Guam 7, V.I. 4
Syphilis: La. delete 2, Ill. 209, Calif. 114, Guam 1, V.I. 1
Rabies: W. Va. 1, Calif. 4
Gonorrhea: 1973 Deletions: Vt. 37, R.I. 83, Minn. 765, Iowa 1338, S. Dak. 85, Okla. 866, Texas 1835, Mont. 168, Colo. 776, Ariz. 590, Alaska 223
Additions: Ill. 32,260
Syphilis: 1973 Deletions: Iowa 19, Ky. 118, Texas 55, Ariz. 13, Nev. 112 Alaska 41; Additions: Ill. 968

Week No. 37

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING SEPTEMBER 14, 1974

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	660	384	194	35	21	28
Boston, Mass.	199	109	61	13	10	7
Bridgeport, Conn.	36	19	16	–	–	2
Cambridge, Mass.	32	24	6	–	1	5
Fall River, Mass.	27	17	7	2	–	–
Hartford, Conn.	55	23	26	4	2	1
Lowell, Mass.	24	18	3	3	–	3
Lynn, Mass.	10	7	3	–	–	–
New Bedford, Mass.	27	15	6	2	–	2
New Haven, Conn.	49	27	14	4	–	–
Providence, R. I.	48	23	19	2	2	3
Somerville, Mass.	6	5	–	–	–	1
Springfield, Mass.	38	25	9	2	1	–
Waterbury, Conn.	55	35	13	2	2	–
Worcester, Mass.	54	37	11	1	3	4
MIDDLE ATLANTIC	2,769	1,688	728	170	82	99
Albany, N. Y.	44	25	11	4	2	2
Allentown, Pa.	26	20	5	–	–	1
Buffalo, N. Y.	138	79	43	8	5	9
Camden, N. J.	30	18	10	1	–	–
Elizabeth, N. J.	25	17	5	1	–	–
Erie, Pa.	41	28	9	1	3	3
Jersey City, N. J.	53	34	11	3	3	1
Newark, N. J.	64	27	23	8	3	3
New York City, N. Y. †	1,215	755	299	84	31	47
Paterson, N. J.	30	12	14	3	1	3
Philadelphia, Pa.	481	283	128	33	17	3
Pittsburgh, Pa.	188	106	59	9	8	13
Reading, Pa.	34	24	6	3	–	1
Rochester, N. Y.	122	75	36	4	2	3
Schenectady, N. Y.	27	15	7	2	1	1
Scranton, Pa.	49	28	18	1	–	1
Syracuse, N. Y.	117	81	25	3	4	1
Trenton, N. J.	30	18	9	–	2	2
Utica, N. Y.	24	17	7	–	–	4
Yonkers, N. Y.	31	26	3	2	–	1
EAST NORTH CENTRAL	2,477	1,427	675	185	99	55
Akron, Ohio	73	43	23	5	1	1
Canton, Ohio	46	29	15	–	2	2
Chicago, Ill.	614	321	184	55	31	17
Cincinnati, Ohio	155	93	37	15	6	5
Cleveland, Ohio	180	101	59	13	4	3
Columbus, Ohio	138	69	37	13	8	–
Dayton, Ohio	121	64	39	10	2	1
Detroit, Mich.	305	179	68	33	9	3
Evansville, Ind.	45	28	15	1	1	2
Fort Wayne, Ind.	39	23	11	3	–	4
Gary, Ind.	18	13	5	–	–	–
Grand Rapids, Mich.	54	35	16	1	2	4
Indianapolis, Ind.	182	110	42	10	13	1
Madison, Wis.	52	26	16	3	4	4
Milwaukee, Wis.	133	88	33	8	1	–
Peoria, Ill.	53	36	12	2	2	1
Rockford, Ill.	46	26	12	3	3	3
South Bend, Ind.	49	36	8	1	1	3
Toledo, Ohio	109	70	23	6	6	–
Youngstown, Ohio	65	37	20	3	3	1
WEST NORTH CENTRAL	859	531	202	61	34	20
Des Moines, Iowa	71	37	17	7	4	2
Duluth, Minn.	29	25	3	1	–	1
Kansas City, Kans.	41	23	10	4	3	3
Kansas City, Mo.	125	76	34	3	9	–
Lincoln, Nebr.	39	25	4	6	1	–
Minneapolis, Minn.	87	54	21	8	3	–
Omaha, Nebr.	96	54	28	7	2	1
St. Louis, Mo.	190	124	44	11	5	4
St. Paul, Minn.	78	51	15	7	2	–
Wichita, Kans.	103	62	26	7	5	9
SOUTH ATLANTIC	1,292	685	396	78	65	33
Atlanta, Ga.	155	94	41	7	8	4
Baltimore, Md.	274	132	86	10	21	2
Charlotte, N. C.	80	36	30	7	2	–
Jacksonville, Fla.	91	50	21	7	6	–
Miami, Fla.	123	77	29	8	6	3
Norfolk, Va.	56	25	18	3	3	6
Richmond, Va.	77	42	26	7	1	5
Savannah, Ga.	34	17	14	–	1	2
St. Petersburg, Fla.	93	73	16	1	1	–
Tampa, Fla.	90	56	24	1	7	7
Washington, D. C.	176	63	76	23	9	4
Wilmington, Del.	43	20	15	4	–	–
EAST SOUTH CENTRAL	750	427	199	54	42	35
Birmingham, Ala.	111	58	36	10	3	1
Chattanooga, Tenn.	52	33	13	3	1	7
Knoxville, Tenn.	41	24	11	3	–	1
Louisville, Ky.	115	71	26	9	4	8
Memphis, Tenn.	186	94	55	11	21	4
Mobile, Ala.	76	50	18	2	3	4
Montgomery, Ala.	38	25	7	1	5	–
Nashville, Tenn.	131	72	33	15	5	10
WEST SOUTH CENTRAL	1,203	651	332	90	63	27
Austin, Tex.	35	18	12	1	–	2
Baton Rouge, La.	66	41	16	5	–	4
Corpus Christi, Tex.	41	21	9	8	1	–
Dallas, Tex.	165	84	40	25	7	2
El Paso, Tex.	42	23	11	5	2	4
Fort Worth, Tex.	107	75	19	3	6	1
Houston, Tex.	245	117	83	14	13	2
Little Rock, Ark.	54	24	20	2	3	2
New Orleans, La.	174	95	48	13	13	1
San Antonio, Tex.	143	76	42	9	8	2
Shreveport, La.	66	39	16	2	5	2
Tulsa, Okla.	65	38	16	3	5	5
MOUNTAIN	530	296	144	26	36	23
Albuquerque, N. Mex.	56	24	21	4	4	10
Colorado Springs, Colo.	28	11	9	4	2	3
Denver, Colo.	129	75	39	4	7	3
Las Vegas, Nev.	25	8	10	1	3	–
Ogden, Utah	15	10	2	2	–	2
Phoenix, Ariz.	127	78	28	6	7	–
Pueblo, Colo.	21	13	5	–	2	5
Salt Lake City, Utah	65	35	19	2	8	–
Tucson, Ariz.	64	42	11	3	3	–
PACIFIC	1,513	944	356	100	55	44
Berkeley, Calif.	18	10	4	2	1	–
Fresno, Calif.	51	30	9	4	3	–
Glendale, Calif.	21	15	4	–	1	1
Honolulu, Hawaii	71	38	20	3	6	4
Long Beach, Calif.	100	67	20	6	3	3
Los Angeles, Calif.	421	264	98	36	9	10
Oakland, Calif.	67	43	18	4	1	2
Pasadena, Calif.	38	23	8	5	1	1
Portland, Oreg.	165	103	38	9	12	5
Sacramento, Calif.	59	39	13	5	–	–
San Diego, Calif.	88	49	23	5	5	–
San Francisco, Calif.	132	79	36	9	3	4
San Jose, Calif.	51	28	11	5	1	2
Seattle, Wash.	143	89	40	5	5	6
Spokane, Wash.	49	35	8	2	4	2
Tacoma, Wash.	39	32	6	–	–	4
Total	12,053	7,033	3,226	799	497	364
Expected Number	11,591	6,687	3,167	804	429	333

†Delayed report for week ending Sept. 7, 1974

SHELLFISH POISONING – Continued

and Massachusetts were officially closed to shellfish harvesting before the mussels were gathered.

No other clinical cases of paralytic shellfish poisoning have been reported to CDC from New England this year, and these are the first cases reported from New England since September 1972 *(1)*.

(Reported by Charles Post, M.D., Emergency Room Physician, St. John's Hospital, Lowell, Massachusetts; Gerald Bousquet, M.D., Private Physician, Chelmsford, Massachusetts; John C. Collins, Director, Division of Environmental Health, John Delaney, Director, Lawrence Experiment Station, and Nicholas J. Fiumara, M.D., State Epidemiologist, Massachusetts Department of Public Health; Maynard H. Mires, M.D., M.P.H., Director, Division of Public Health, New Hampshire State Department of Health and Welfare; the Food and Drug Administration; and the Enteric Diseases Branch, Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

Editorial Note

Paralytic shellfish poisoning occurs worldwide and results from ingestion of a variety of shellfish that have themselves ingested toxic species of dinoflagellates *(2)*. The potent neurotoxin elaborated by the dinoflagellate is concentrated in the digestive glands of the shellfish. This toxin has been referred to as a saxitoxin, having been extracted from the Alaskan butterclam *Saxidomus giganteus*.

Dinoflagellates and other phytoplankton are important as producers of the primary food supply of the sea. At certain times of the year in certain weather conditions, the dinoflagellates "bloom" in excessive numbers coloring the water from light green to deep amber. Often there is a distinctive reddish tinge to the water, hence the name "red tide". Red tides occur in coastal waters (since offshore waters are less favorable to the growth of dinoflagellates) and may be fatal to massive numbers of fish when the dinoflagellates exhaust the oxygen supply of the water. Other animal life in the affected areas may die after consuming the shellfish.

The activities of these toxic organisms were appreciated in ancient times. Perhaps the first reference is recorded in Exodus 7:20-21: "And all the waters that were in the river were turned to blood. And the fish that was in the river died; and the river stank, and the Egyptians could not drink of the water of the rivers." Ancient Greek authors applied the name "red sea" to the coasts of Arabia presumably because of red water blooms in this region.

Centuries before Europeans reached the shores of the Pacific, the Indians watched the sea at night for luminescence, a phenomenon caused by the dinoflagellate *Noctiluca* that frequently accompanies red tides off the Pacific Coast. Indian guards were posted to warn the unwary not to eat shellfish during this period of luminescence; this might have been the earliest effort to maintain a public health quarantine. In 1789, George Vancouver noted during his exploration that a member of his crew died after consuming mussels *(3)*. The first large epidemic recorded in the United States was in San Francisco in 1927 in which 102 persons were ill and 6 died *(4)*. Today, illness associated with the red tide is uncommon; no deaths resulting from shellfish poisoning have been reported to CDC.

References

1. Center for Disease Control: Morbidity and Mortality Weekly Rep 21(38):325, 23 Sept 1972
2. Halstead BW: Protozoa. In Poisonous and Venomous Marine Animals of the World. Vol I. Washington, GPO, 1965
3. Vancouver G: Voyage of Discovery to the North Pacific Ocean and Round the World. Vol II, London, 1789, p 284 *as cited in* McCollum JPK: An epidemic of mussel poisoning in northeast England. Lancet 2: 767, 1968
4. Meyer KF, Sommer H, Schoenholz P: Mussel poisoning. J Prev Med 2:365-394, 1928

LEAD POISONING – Idaho

Between August 12 and 23, 1974, blood levels and free erythrocyte protoporphyrin levels were evaluated in children 1-9 years of age living near a lead smelter in Kellogg, Idaho. The investigation followed the hospitalization of 2 children from Kellogg for symptomatic lead poisoning. A total of 1,046 venous blood samples were obtained from a representative sample of 507 houses. Samples of household dust, yard dirt, plants, interior and exterior paint, pottery, and vegetables were also obtained for lead analysis from the children's homes.

Blood lead analyses have been conducted on 3 groups of children: those living within 1 mile of the smelter; those living from 1 to 2½ miles from the smelter; and those in a town approximately 50 miles away, who served as controls. Of 171 children tested in the first area, 38 (22%) had blood lead levels $\geq$ 80μg/100ml of whole blood, and 170 (99%) had blood lead levels $\geq$ 40μg/100ml. In the second group, 3 children (1.5%) had levels $\geq$ 80μg/100ml, and 151 (76%) had levels $\geq$ 40 μg/100ml. In the control area, 1 child of 89 had a blood lead level $\geq$ 40μg/100ml (Table 1). A whole blood lead level $\geq$ 40μg/100ml is considered by the Surgeon General to indicate "undue lead absorption," while a level of 80μg/100ml or more indicates frank lead poisoning *(1)*.

Table 1
Lead Survey, Kellogg, Idaho, August 12-23, 1974

Blood Lead Levels in μg/100ml Whole Blood	Within 1 Mile No. (%)	1-2½ Miles No. (%)	Control No. (%)
<20	0	1 (0.5)	34 (38.2)
20-39	1 (0.6)	47 (23.6)	54 (60.7)
40-59	59 (34.5)	109 (54.8)	1 (1.1)
60-79	73 (42.7)	39 (19.6)	0
80-99	25 (14.6)	3 (1.5)	0
$\geq$100	13 (7.6)	0	0

Children with levels $\geq$ 80μg/100ml are being hospitalized or treated in outpatient clinics. Children with levels of 40-79μg/100ml may be evaluated for possible neuropsychologic impairment along with the standard medical evaluation. Further lead and protoporphyrin testing is in progress. Measures to control smelter lead emissions are being investigated.

(Reported by James A. Bax, Ph.D., Director, and John A.

LEAD POISONING – Continued

Mather, M.D., Administrator, Division of Health Services, Idaho Department of Health and Welfare; Larry M. Belmont, M.P.H., Director, Panhandle Health District; Thomas O. Reeds, M.D., Pediatrician, Coeur d'Alene, Idaho; the Toxicology Branch, Clinical Chemistry Division, Bureau of Laboratories, CDC; the Environmental Hazards Activity, Cancer & Birth Defects Division, Bureau of Epidemiology, CDC; and a team of EIS Officers.)

Editorial Note

These preliminary results indicate that blood lead levels $\geq 40\mu g/100$ ml are almost universal among young children living within a 1-mile radius of the Kellogg lead smelter and that the frequency of such levels decreases directly with distance from the smelter. These data suggest that the smelter may be an important source of the lead absorbed by children living in this area.

This pattern of lead absorption resembles that previously noted in children living near a large smelter in El Paso, Texas, (MMWR, Vol. 22, No. 49). There, however, only 53% of 1- to 9-year-old children living within 1 mile of the smelter had blood levels $\geq 40\mu g/100ml$, and levels $> 80\mu g/100ml$ were quite unusual. Ingestion and inhalation of particulate lead emitted by the smelter were considered to be the most important mechanisms of lead uptake in El Paso.

Reference

1. Medical aspects of childhood lead poisoning. Pediat 48:464-468, 1971

INTERNATIONAL NOTES
QUARANTINE MEASURES

The following changes should be made in the "Supplement – United States Designated Yellow Fever Vaccination Centers," MMWR, Vol. 22, No. 32:

DISTRICT OF COLUMBIA

Peace Corps
Change name from Office of Medical Programs, Peace Corps, to: Office of Medical Affairs, ACTION, International Operation/PC, 806 Connecticut Avenue, N.W., Washington, D.C. 20525

IDAHO

Twin Falls

South Central District Health Department 83301
Change address to: 324 Second Avenue, East
Mailing address: Box HH remains the same
Change telephone to: 208-734-5900

The Morbidity and Mortality Weekly Report, circulation 39,000, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control — David J. Sencer, M.D.
Director, Bureau of Epidemiology, CDC — Philip S. Brachman, M.D.
Editor, MMWR — Michael B. Gregg, M.D.
Managing Editor, MMWR — Deborah L. Jones, B.S.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

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